

1 While the invention has been described in conjunction with specific
2 embodiments, it is evident that many alternatives, modifications, permutations and
3 variations will become apparent to those skilled in the art in light of the foregoing
4 description. Accordingly, it is intended that the present invention embrace all such
5 alternatives, modifications and variations as fall within the scope of the appended
6 claims.

7 What is claimed is:

10/22/90 "94059690

1. A PC card video recording device, comprising:
 - a PCMCIA compliant connector;
 - a decrypter that receives encrypted video data through the connector and decrypts the video data into a video data stream;
 - a memory;
 - a processor; and
 - a filter, receiving the video data stream, and sending a portion of the video data stream specified by the processor to the memory for storage.
2. The apparatus according to claim 1, further comprising an encrypter that receives data stored in the memory, encrypts the data and sends the data to the connector, under control of the processor.
3. The apparatus according to claim 1, further comprising a memory interface receiving the video data stream from the filter that stores the data stream in the memory.
4. The apparatus according to claim 2, further comprising a memory interface receiving the video data stream from the filter that stores the data stream in the memory, and that retrieves the stored data from the memory and sends the retrieved data to the encrypter.
5. The apparatus according to claim 4, wherein the stored data is retrieved according to a packet identifier associated with the stored data.
6. The apparatus according to claim 4, further comprising a reference clock that sends timing information to the memory interface for storage with the video data stream.

1 7. The apparatus according to claim 1, further comprising means for receiving
2 a smart card, the smart card containing data used to generate a decryption key
3 used by the decrypter.
4

5 8. The apparatus according to claim 2, further comprising means for receiving
6 a smart card, the smart card containing data used to generate a decryption key
7 used by the decrypter and an encryption key used by the encrypter.
8

9 9. The apparatus according to claim 1, further comprising an encrypter that
10 encrypts the data stream prior to storage in the memory.
11

12 10. The apparatus according to claim 2, further comprising a second encrypter
13 that encrypts the data stream prior to storage in the memory, and a second
14 decrypter that decrypts the data retrieved from memory prior to encrypting the data
15 using the encrypter and sending the data to the connector.
16

17 11. The apparatus according to claim 1, wherein the memory comprises solid
18 state non-volatile memory.
19

20 12. The apparatus according to claim 2, wherein the memory comprises solid
21 state non-volatile memory.
22

1 13. A PC card recording device, comprising:
2 a PCMCIA compliant connector;
3 a decrypter that receives encrypted data through the connector and decrypts
4 the data into a data stream;
5 a memory;
6 a processor; and
7 a filter, receiving the data stream, and sending a portion of the data stream
8 specified by the processor to the memory for storage.
9

10 14. The apparatus according to claim 13, further comprising an encrypter that
11 receives data stored in the memory, encrypts the data and sends the data to the
12 connector, under control of the processor.

13
14 15. The apparatus according to claim 13, further comprising a memory interface
15 receiving the data stream from the filter and that stores the data stream in the
16 memory.
17

18 16. The apparatus according to claim 14, further comprising a memory interface
19 receiving the data stream from the filter and storing the data stream in the memory,
20 and that retrieves the stored data from the memory and sends the retrieved data to
21 the encrypter.
22

23 17. The apparatus according to claim 16, wherein the stored data is stored and
24 retrieved according to a packet identifier associated with the stored data.
25

26 18. The apparatus according to claim 15, further comprising a reference clock
27 that sends timing information to the memory interface for storage with the data
28 stream.
29

19. The apparatus according to claim 13, further comprising means for receiving a smart card, the smart card containing information used to generate a decryption key used by the decrypter.

20. The apparatus according to claim 14, further comprising means for receiving a smart card, the smart card containing information used to generate a decryption key used by the decrypter and an encryption key used by the encrypter.

21. The apparatus according to claim 13, further comprising an encrypter that encrypts the data stream prior to storage in the memory.

22. The apparatus according to claim 14, further comprising a second encrypter that encrypts the data stream prior to storage in the memory, and a second decrypter that decrypts the data retrieved from memory prior to encrypting the data using the encrypter and sending the data to the connector.

23. The apparatus according to claim 13, wherein the memory comprises solid state non-volatile memory.

24. The apparatus according to claim 14, wherein the memory comprises solid state non-volatile memory.

- 1 25. A PC card video recording and playback device, comprising:
2 a PCMCIA compliant connector;
3 a first decrypter that receives encrypted video data through the connector
4 and decrypts the video data into a video data stream;
5 a solid state non-volatile memory;
6 a memory interface;
7 a processor;
8 a filter, receiving the video data stream, and sending a portion of the video
9 data stream associated with a packet identifier specified by the processor to the
10 memory interface for storage in the memory;
11 a reference clock that sends timing information to the memory interface for
12 storage with the video data stream; and
13 a first encrypter that receives data stored in the memory according to a
14 packet identifier associated with the stored data from the memory interface,
15 encrypts the data and sends the data to the connector, under control of the
16 processor.
- 17
18 26. The apparatus according to claim 25, further comprising means for receiving
19 a smart card, the smart card containing information used to generate a decryption
20 key used by the first decrypter and an encryption key used by the first encrypter.
- 21
22 27. The apparatus according to claim 25, further comprising a second encrypter
23 that encrypts the data stream prior to storage in the memory.
- 24
25 28. The apparatus according to claim 25, further comprising a second encrypter
26 that encrypts the data stream prior to storage in the memory, and a second
27 decrypter that decrypts the data retrieved from memory prior to encrypting the data
28 using the first encrypter and sending the data to the connector.
- 29
30

- 1 29. A method, carried out in a PC card recorder, of storing video programming
2 on the PC card recorder, comprising:
3 receiving an encrypted video data stream;
4 decrypting the encrypted video data stream to produce a video data stream;
5 filtering the video data stream to remove data not related to a program
6 identified by a packet identifier to produce a filtered video data stream; and
7 storing the filtered video data stream in a solid state memory.
8
9 30. The method according to claim 29, further comprising encrypting the filtered
10 video data stream before storing the filtered video data stream in the solid state
11 memory.
12
13 31. The method according to claim 29, further comprising time stamping the
14 filtered video data stream before storing the filtered video data stream in the solid
15 state memory.
16
17 32. The method according to claim 29, further comprising incrementing a write
18 pointer associated with the memory as the filtered video data stream is stored to
19 the memory.
20
21 33. The method according to claim 29, wherein the encrypted video data stream
22 is received through a PCMCIA compliant connector.
23
24 34. The method according to claim 29, wherein the receiving, decrypting, filtering
25 and storing are carried out under instructions from a programmed processor.
26

1 35. A method, carried out in a PC card recorder, of playback of video
2 programming stored on the PC card recorder, comprising:

3 identifying a packet identifier associated with a program to be played;
4 retrieving a video data stream associated with the packet identifier from a
5 solid state memory;
6 encrypting the video data stream to produce an encrypted video data stream;
7 and
8 sending the encrypted video data stream to a PCMCIA connector.
9

10 36. The method according to claim 35, further comprising decrypting the video
11 data stream after retrieving and before encrypting and sending.

12
13 37. The method according to claim 35, wherein the video data stream includes
14 time stamps.

15
16 38. The method according to claim 37, wherein the encrypted video data stream
17 is sent to the PCMCIA connector at a time determined by the time stamps.

18
19 39. The method according to claim 35, further comprising incrementing a read
20 pointer associated with the memory as the video data stream is retrieved from the
21 memory.

22
23 40. The method according to claim 35, wherein the identifying, retrieving,
24 encrypting and sending are carried out under instructions from a programmed
25 processor.
26
27

1 41. A recording module, comprising:
2 a connector suitable for interconnecting with a conditional access point of
3 deployment module (POD) connector in a receiver;
4 a memory; and
5 circuit means for receiving information through the connector and for storing
6 the information on the memory.
7

8 42. The apparatus according to claim 41, further comprising a decrypter that
9 receives the information in encrypted form through the connector and decrypts the
10 information to produce a decrypted data stream.
11

12 43. The apparatus according to claim 42, further comprising means for receiving
13 a smart card within the recording module, the smart card containing information
14 used to generate a decryption key used by the decrypter.
15

16 44. The apparatus according to claim 42, further comprising:
17 a processor; and
18 a filter, receiving the data stream, and sending a portion of the data stream
19 associated with a packet identifier specified by the processor to the memory for
20 storage.
21

22 45. The apparatus according to claim 44, further comprising a memory interface,
23 receiving the data stream from the filter, that stores the data stream in the memory.
24

25 46. The apparatus according to claim 45, further comprising a reference clock
26 that sends timing information to the memory interface for storage with the data
27 stream.
28
29

1 47. The apparatus according to claim 41, further comprising:
2 a processor; and
3 a filter, receiving the information, and sending a portion of the information
4 associated with a packet identifier specified by the processor to the memory for
5 storage.
6

7 48. The apparatus according to claim 41, further comprising an encrypter that
8 receives data stored in the memory, encrypts the data and sends the data to the
9 connector.
10

11 49. The apparatus according to claim 48, further comprising an encrypter that
12 encrypts the data stream prior to storage in the memory, and a decrypter that
13 decrypts the data retrieved from memory prior to encrypting the data using the
14 encrypter and sending the data to the connector.
15

16 50. The apparatus according to claim 48, further comprising means for receiving
17 a smart card within the module, the smart card containing an encryption key used
18 by the encrypter.
19

20 51. The apparatus according to claim 48, further comprising a memory interface
21 that retrieves the stored data from the memory and sends the retrieved data to the
22 encrypter.
23

24 52. The apparatus according to claim 51, wherein the stored data is retrieved
25 according to a packet identifier associated with the stored data.
26

27 53. The apparatus according to claim 41, wherein the connector comprises a
28 PCMCIA compliant connector.
29
30

1 54. The apparatus according to claim 41, further comprising a encrypter that
2 encrypts the data stream prior to storage in the memory.

3
4 55. The apparatus according to claim 41, wherein the memory comprises solid
5 state non-volatile memory.

6
7 56. The apparatus according to claim 41, wherein the information contains video
8 content.

1 57. A method, comprising:
2 receiving a stream of information through a conditional access point of
3 deployment module (POD) connector in a receiver; and
4 storing at least a portion of the stream of information in a memory.

5
6 58. The method according to claim 57, wherein the stream of information is
7 encrypted, and further comprising decrypting the stream of information.

8
9 59. The method according to claim 58, further comprising generating a
10 decryption key, retrieving the information from the memory and decrypting the
11 information using the decryption key.

12
13 60. The method according to claim 57, further comprising filtering the stream of
14 information to remove information not associated with a specified packet identifier.

15
16 61. The method according to claim 57, further comprising storing timing
17 information from a reference clock with the stream of information.

18
19 62. The method according to claim 61, further comprising:
20 retrieving the stored information;
21 sending the retrieved information to an encrypter at a time determined by the
22 time stamp;
23 encrypting the stored information; and
24 transmitting the encrypted information to the receiver through the conditional
25 access point of deployment module (POD) connector.
26
27

1 63. The method according to claim 57, further comprising:
2 retrieving the stored information;
3 encrypting the stored information; and
4 transmitting the stored information to the receiver through the conditional
5 access point of deployment module (POD) connector.
6

7 64. The method according to claim 63, further comprising reading an encryption
8 key from a smart card, and wherein the stream of information is encrypted using
9 the encryption key read from the smart card.
10

11 65. The method according to claim 63, wherein the stored information is
12 retrieved according to a packet identifier associated with the stored information.
13

14 66. The method according to claim 57, wherein the connector comprises a
15 PCMCIA compliant connector.
16

17 67. The method according to claim 58, further comprising encrypting the stream
18 of information prior to storage in the memory.
19

20 68. The memory according to claim 57, wherein the memory comprises solid
21 state memory.
22

23 69. The apparatus according to claim 58, wherein the memory comprises solid
24 state memory.
25

26 70. The method according to claim 57, carried out under control of a
27 programmed processor.
28

29 71. The method according to claim 57, wherein the receiver comprises an
30 OpenCable compliant receiver.

1 72. The method according to claim 57, wherein the receiver is part of a television
2 Set-Top Box.

3
4 73. The method according to claim 57, wherein the receiver is part of a television
5 receiver.

6
7 74. The method according to claim 57, wherein the information comprises video
8 information.

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

1 75. An electronic storage medium, storing instructions which, when executed
2 on a programmed processor, carry out a method of recording video, comprising:
3 receiving stream of video information through a conditional access point of
4 deployment module (POD) connector in a video receiver; and
5 storing at least a portion of the stream of video information in a memory.
6
7

POD connector

1 76. A PC card device, comprising:
2 a PCMCIA compliant connector;
3 a decrypter that receives encrypted video data through the connector and
4 decrypts the video data into a video data stream;
5 a memory;
6 a processor;
7 a filter, receiving the video data stream, and sending a portion of the video
8 data stream associated with a packet identifier specified by the processor to the
9 memory for storage; and
10 an encrypter that receives data stored in the memory, encrypts the data and
11 sends the data to the connector, under control of the processor.

12
13 77. The apparatus according to claim 76, further comprising a memory interface,
14 receiving the video data stream from the filter, that stores the data stream in the
15 memory, and that retrieves the stored data from the memory and sends the
16 retrieved data to the encrypter.

17
18 78. The apparatus according to claim 77, further comprising a reference clock
19 that sends timing information to the memory interface for storage with the video
20 data stream.

21
22 79. The apparatus according to claim 77, further comprising means for receiving
23 a smart card, the smart card containing information used to generate a decryption
24 key used by the decrypter and an encryption key used by the encrypter.
25
26

1 80. A PC card device, comprising:
2 a PCMCIA compliant connector;
3 a first decrypter that receives encrypted video data through the connector
4 and decrypts the video data into a video data stream;
5 a memory;
6 a processor;
7 a second encrypter;
8 a filter, receiving the video data stream, and sending a portion of the video
9 data stream associated with a packet identifier specified by the processor to the
10 second encrypter for encrypting the video data stream to produce an encrypted
11 video data stream;
12 a memory interface for receiving the encrypted video data stream for storage
13 in the memory, and for retrieving the encrypted video data stream from the memory;
14 a second decrypter that decrypts the video data stream retrieved from
15 memory; and
16 a first encrypter that receives video data stream from the second decrypter,
17 encrypts the video data stream and sends the encrypted video data stream to the
18 connector, under control of the processor.
19
20 81. The apparatus according to claim 80, further comprising a reference clock
21 that sends timing information to the memory interface for storage with the video
22 data stream.
23
24 82. The apparatus according to claim 80, further comprising means for receiving
25 a smart card, the smart card containing data used to generate a decryption key
26 used by the first decrypter and an encryption key used by the first encrypter.
27
28 83. The apparatus according to claim 80, wherein the memory comprises solid
29 state non-volatile memory.

1 84. A video device, comprising:
2 a conditional access point of deployment module (POD) interface for
3 receiving a point of deployment module;
4 a receiver front end unit receiving a signal containing video information and
5 sending a video stream to the POD interface;
6 a circuit card coupled to POD interface and receiving the video stream;
7 a memory residing on the circuit card; and
8 a memory interface residing on the circuit card for storing video content
9 forming a part of the video stream in the memory.

10
11 85. The apparatus according to claim 84, wherein the video stream is encrypted,
12 and further comprising a decrypter residing on the circuit card that decrypts the
13 encrypted video stream to produce a decrypted video stream.

14
15 86. The apparatus according to claim 85, further comprising a filter residing on
16 the circuit card that removes information from the decrypted video stream not
17 relevant to the video content to produce a filtered video stream, and wherein the
18 video content comprises the filtered video stream.

19
20 87. The apparatus according to claim 86, wherein the memory interface also
21 retrieves the stored video content from the memory.

22
23 88. The apparatus according to claim 87, further comprising an encrypter
24 residing on the circuit card that encrypts the retrieved video content and sends the
25 encrypted video content to the POD interface.
26

1 89. The apparatus according to claim 88, further comprising a decrypter that
2 receives the encrypted video content and decrypts the encrypted video content to
3 produce decrypted video content.

4
5 90. The apparatus according to claim 89, further comprising:
6 a demultiplexer that receives the decrypted video content and separates the
7 decrypted video content into video and audio components;
8 an audio decoder receiving the audio components and converting the audio
9 components into an audio signal output that can be played by a television set; and
10 a video decoder receiving the video components and converting the video
11 components into a video signal output that can be played by the television set.

12
13 91. The apparatus according to claim 84, further comprising a reference clock
14 residing on the circuit card that sends timing information to the memory interface
15 for storage in the memory with the video data stream.

16
17 92. The apparatus according to claim 84, further comprising means for receiving
18 a smart card, the smart card containing data used to generate a decryption key
19 used by the decrypter.

20
21 93. The apparatus according to claim 88, further comprising means for receiving
22 a smart card, the smart card containing information used to generate a decryption
23 key used by the decrypter and an encryption key used by the encrypter.

24
25 94. The apparatus according to claim 84, wherein the memory comprises solid
26 state memory.

27
28 95. The apparatus according to claim 84, wherein the memory comprises solid
29 state non-volatile memory.

1 96. The apparatus according to claim 85, wherein the video device comprises
2 one of a television Set-Top Box and a television set.

TO 250 405960

1 97. A video device, comprising:
2 a conditional access point of deployment module (POD) interface for
3 receiving a point of deployment module;
4 a receiver front end unit receiving a signal containing video information and
5 sending a video stream to the POD interface;
6 a circuit card coupled to POD interface and receiving the video stream
7 wherein the video stream is encrypted;
8 a memory residing on the circuit card;
9 a decrypter residing on the circuit card that decrypts the encrypted video
10 stream to produce a decrypted video stream;
11 a filter residing on the circuit card that removes information from the
12 decrypted video stream not relevant to the video content to produce a filtered video
13 stream;
14 a memory interface residing on the circuit card for storing the filtered video
15 stream in the memory, and for retrieving the stored video stream from the memory
16 to obtain a retrieved video stream; and
17 an encrypter residing on the circuit card that encrypts the retrieved video
18 stream and sends the encrypted retrieved video stream to the POD interface.

19
20 98. The apparatus according to claim 97, further comprising a decrypter that
21 receives the encrypted retrieved video content from the POD interface and decrypts
22 the encrypted retrieved video content to produce decrypted video content.

23
24 99. The apparatus according to claim 98, further comprising:
25 a demultiplexer that receives the decrypted video content and separates the
26 decrypted video content into video and audio components;
27 an audio decoder receiving the audio components and converting the audio
28 components into an audio signal output that can be played by a television set; and
29 a video decoder receiving the video components and converting the video
30 components into a video signal output that can be played by the television set.

1 100. The apparatus according to claim 97, further comprising a reference clock
2 residing on the circuit card that sends timing information to the memory interface
3 for storage in the memory with the filtered video data stream.
4

5 101. The apparatus according to claim 97, further comprising means for receiving
6 a smart card, the smart card containing data used to generate a decryption key
7 used by the decrypter and an encryption key used by the encrypter.
8

9 102. The apparatus according to claim 97, wherein the memory comprises solid
10 state memory.
11

12 103. The apparatus according to claim 97, wherein the memory comprises solid
13 state non-volatile memory.
14

15 104. The apparatus according to claim 97, wherein the video device comprises
16 one of a television Set-Top Box and a television set.
17

1 105. A method of operation of a video device, comprising:
2 sending a video stream to a conditional access point of deployment module
3 (POD) interface;
4 receiving the video stream at a circuit card coupled to the POD interface; and
5 storing video content forming a part of the video stream in a memory residing
6 on the circuit card.

7
8 106. The method according to claim 105, wherein the video stream is encrypted,
9 and further comprising decrypting the encrypted video stream to produce a
10 decrypted video stream using a decrypter residing on the circuit card.

11
12 107. The method according to claim 106, further comprising removing information
13 from the decrypted video stream not relevant to the video content to produce a
14 filtered video stream using a filter residing on the circuit card, and wherein the video
15 content comprises the filtered video stream.

16
17 108. The method according to claim 107, further comprising encrypting the
18 retrieved video content using an encrypter residing on the circuit card and sending
19 the encrypted video content to the POD interface.

20
21 109. The method according to claim 108, further comprising receiving the
22 encrypted video content and decrypting the encrypted video content to produce
23 decrypted video content.

24
25 110. The method according to claim 109, further comprising:
26 separating the decrypted video content into video and audio components;
27 converting the audio components into an audio signal output that can be
28 played by a television set; and
29 converting the video components into a video signal output that can be
30 played by the television set.

1 111. The method according to claim 105, further comprising storing timing
2 information from a reference clock residing on the circuit card in the memory with
3 the video data stream.

4
5 112. The method according to claim 106, further comprising obtaining a
6 decryption key for use by the decrypter.

7
8 113. The method according to claim 108, further comprising obtaining a
9 decryption key for use by the decrypter and an encryption key for use by the
10 encrypter.

11
12 114. The method according to claim 105, wherein the memory comprises solid
13 state memory.

14
15 115. The method according to claim 105, wherein the memory comprises solid
16 state non-volatile memory.

17
18 116. The method according to claim 105, carried out in one of a television Set-
19 Top Box and a television set.

117. An electronic storage medium storing instructions which, when executed on a programmed processor, carry out a method of operation of a video device, comprising:

sending a video stream derived from the video signal to a conditional access point of deployment module (POD) interface;

receiving the video stream at a circuit card coupled to the POD interface; and

storing video content forming a part of the video stream in a memory residing on the circuit card.

1 118. A video device, comprising:
2 a first conditional access point of deployment module (POD) interface for
3 receiving a first point of deployment module;
4 a second conditional access point of deployment module (POD) interface
5 for receiving a second point of deployment module; and
6 receiver front end means for receiving a signal containing video information
7 and sending a first video stream to the first POD interface, and a second video
8 stream to the second POD interface.

9
10 119. The apparatus according to claim 118, further comprising:
11 a first circuit card coupled to the first POD interface and receiving the first
12 video stream;
13 a first memory residing on the first circuit card; and
14 means residing on the first circuit card for storing first video content forming
15 a part of the video stream in the first memory.

16
17 120. The apparatus according to claim 119, wherein the first video stream is
18 encrypted, and further comprising a first decrypter residing on the first circuit card
19 that decrypts the encrypted first video stream to produce a decrypted first video
20 stream.

21
22 121. The apparatus according to claim 120, further comprising a first filter residing
23 on the first circuit card that removes information from the decrypted first video
24 stream not relevant to the first video content.

25
26 122. The apparatus according to claim 118, further comprising means residing
27 on the first circuit card for retrieving the first video content from the first memory and
28 sending the first video content to the first POD interface.

1 123. The apparatus according to claim 122, further comprising a first encrypter
2 residing on the first circuit card for encrypting the first video content prior to sending
3 the first video content to the first POD interface.
4

5 124. The apparatus according to claim 119, further comprising:
6 a second circuit card coupled to the second POD interface and receiving the
7 second video stream;
8 a second memory residing on the second circuit card; and
9 means residing on the second circuit card for storing second video content
10 forming a part of the video stream in the second memory.
11

12 125. The apparatus according to claim 124, wherein the second video stream is
13 encrypted, and further comprising a second decrypter residing on the second
14 circuit card that decrypts the encrypted second video stream to produce a
15 decrypted second video stream.
16

17 126. The apparatus according to claim 125, further comprising a second filter
18 residing on the second circuit card that removes information from the decrypted
19 second video stream not relevant to the second video content.
20

21 127. The apparatus according to claim 125, further comprising means residing
22 on the second circuit card for retrieving the second video content from the second
23 memory and sending the second video content to the second POD interface.
24

25 128. The apparatus according to claim 127, further comprising a second
26 encrypter residing on the second circuit card for encrypting the second video
27 content prior to sending the second video content to the second POD interface.
28

1 129. The apparatus according to claim 128, further comprising means residing
2 on the second circuit card for retrieving the second video content from the second
3 memory and sending the second video content to the second POD interface.
4

5 130. The apparatus according to claim 129, further comprising a second
6 encrypter residing on the second circuit card for encrypting the second video
7 content prior to sending the second video content to the second POD interface.
8

9 131. The apparatus according to claim 119, further comprising:
10 a second circuit card coupled to the second POD interface and receiving the
11 second video stream;
12 a second memory residing on the second circuit card;
13 means residing on the second circuit card for storing second video content
14 forming a part of the video stream in the second memory; and
15 means residing on the second circuit card for retrieving the second video
16 content from the second memory and sending the second video content to the
17 second POD interface.
18

19 132. The apparatus according to claim 131, further comprising means for
20 selecting one of the first and second video content from the first and second POD
21 interfaces.
22

23 133. The apparatus according to claim 132, further comprising a decrypter that
24 receives the selected video content and decrypts the selected video content.
25

26 134. The apparatus according to claim 118, wherein the video device comprises
27 one of a television Set-Top Box and a television set.

1 135. The apparatus according to claim 133, further comprising:
2 a demultiplexer that receives the decrypted selected video content and
3 separates the decrypted selected video content into video and audio components;
4 an audio decoder receiving the audio components and converting the audio
5 components into an audio signal output that can be played by a television set; and
6 a video decoder receiving the video components and converting the video
7 components into a video signal output that can be played by the television set.
8

9 136. The apparatus according to claim 118, wherein the receiver front end means
10 comprises a first receiver front end and a second receiver front end.
11
12

10/22/00 "SH059669"

1 137. A method of recording a digital video signal, comprising:
2 receiving a digitally encoded video signal, the signal having pictures encoded
3 as groups of pictures with the groups of pictures having intra-coded pictures, and
4 inter-coded pictures;
5 storing the digitally encoded video signal to an addressable storage device;
6 and
7 storing in a table a starting address and an ending address for each intra-
8 coded picture.
9
10

10/22/2004 5:40:59 PM

138. A method of retrieving a digitally encoded video signal stored in an addressable electronic storage device, the signal having pictures encoded as groups of pictures with the groups of pictures having intra-coded pictures, and inter-coded pictures, the method comprising:

for each of a plurality of intra-coded pictures:

looking up a starting address in a table for an intra-coded picture;

looking up an ending address in the table for the intra-coded picture;

and

retrieving the intra-coded picture from the addressable storage device.

139. The method according to claim 138, displaying the retrieved intra-coded pictures on a display.

1 140. A method of recording a digital video signal, comprising:
2 receiving a digitally encoded video signal, the signal having pictures encoded
3 as groups of pictures with the groups of pictures having intra-coded pictures, and
4 inter-coded pictures;
5 determining which of the pictures are intra-coded pictures;
6 storing the digitally encoded video signal to a storage device; and
7 storing in a header associated with each intra-coded picture with an identifier
8 identifying the picture to be an intra-coded picture.
9

10 141. The method according to claim 140, wherein the header contains an
11 indicator of a starting point for an intra-coded picture.
12

13 142. The method according to claim 140, wherein the header contains an
14 indicator of an ending point for an intra-coded picture.

1 143. A method of retrieving a digitally encoded video signal stored in an electronic
2 storage device, the signal having pictures encoded as groups of pictures with the
3 groups of pictures having intra-coded pictures, and inter-coded pictures, the
4 method comprising:

5 for each of a plurality of pictures:

6 reading a header associated with each picture;

7 determining from an identifier in the header whether the picture is an
8 intra-coded picture; and

9 if so, retrieving the intra-coded picture.

10
11 144. The method according to claim 143, displaying the retrieved intra-coded
12 pictures on a display.
13
14
15

1 145. A method of providing pairing security in a PC card recorder, comprising:
2 at the PC card recorder, receiving an identifier from a host device;
3 storing the identifier in the PC card recorder;
4 receiving a digital video signal from the host device; and
5 storing the digital video signal in a memory of the PC card recorder.
6

TO: 260 640 59660

1 146. A method of providing pairing security in a PC card recorder, comprising:
2 receiving a request to play a stored digital video signal;
3 at the PC card recorder, retrieving a stored host device identifier from a
4 memory;
5 at the PC card recorder, receiving an identifier from the host device;
6 at the PC card recorder, comparing the identifier with the stored identifier;
7 and
8 playing the stored digital video signal from a memory of the PC card recorder
9 if the identifier and the stored identifier match.

10
11 147. The method according to claim 146, further comprising rejecting the request
12 to play in the event the identifier and the stored identifier do not match.
13

1 148. A method of recording a television program, comprising:
2 receiving a command signal from a remote commander to record a selected
3 television program;
4 at a host processor, determining a packet identifier corresponding to the
5 selected television program;
6 sending the packet identifier along with a record command to a POD
7 interface;
8 at a PC card recorder;
9 receiving a transport stream from the POD interface;
10 receiving the packet identifier and the record command from the POD
11 interface;
12 instructing a transport stream filter to delete packets not associated
13 with the packet identifier; and
14 recording the packets associated with the packet identifier to a
15 memory.
16

1 149. A method of recording a television program at a PC card recorder,
2 comprising:
3 receiving a transport stream from a POD interface;
4 receiving the packet identifier and the record command from the POD
5 interface;
6 instructing a transport stream filter to delete packets not associated with the
7 packet identifier; and
8 recording the packets associated with the packet identifier to the PC card
9 recorder connected to the POD interface.
10
11

10/22/2011 10:26:50 AM

1 150. A method of storing information from an MPEG transport stream,
2 comprising:

3 receiving a picture from the MPEG transport stream;
4 determining a type associated with the picture; and
5 storing a type indicator along with the picture in a memory.
6

7 151. The method according to claim 150, wherein the type indicator is stored in
8 a table.
9

10 152. The method according to claim 151, wherein the type indicator is stored in
11 the table along with a starting address for the packet.
12

13 153. The method according to claim 150, wherein the type indicator is stored in
14 a packet header.